U.S. DEPARTMENT OF ENERGY

Office of ENERGY EFFICIENCY & RENEWABLE ENERGY

Overview of Vehicle Technologies Office Analysis

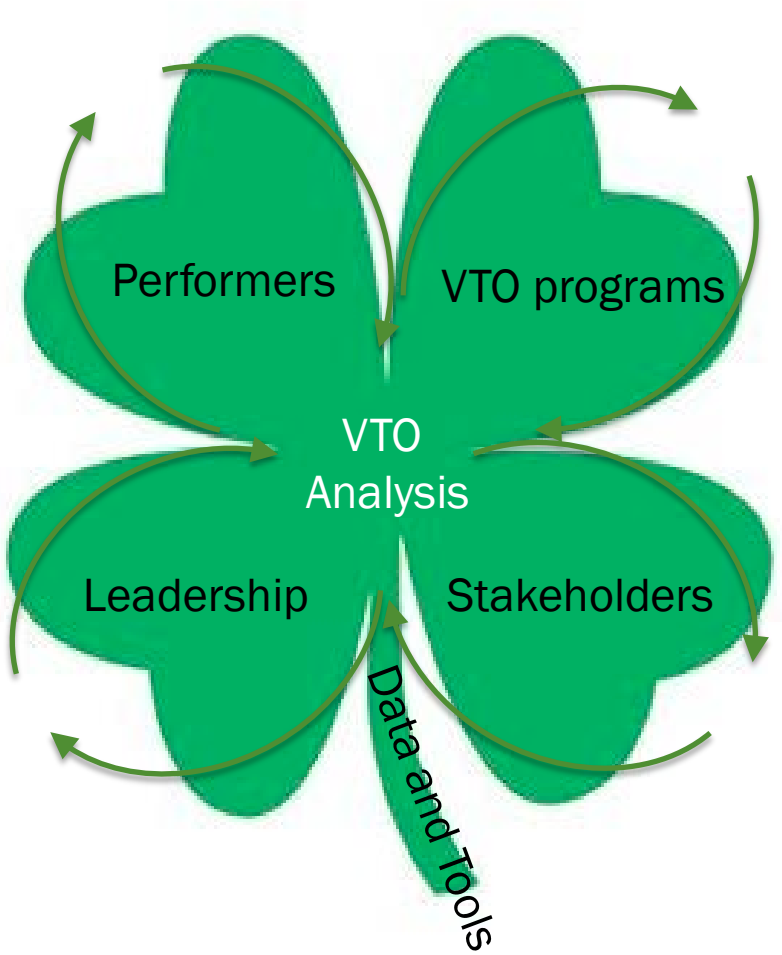
Rachael Nealer, PhD

VTO Analysis, Program Manager

Analysis Supports VTO Sub-programs

Component — Vehicle — Transportation System

Sneak Peak: The meat of the presentation



Why we're talking about transportation energy

Transportation is 29% of total U.S. energy use

The average household spends 15% of their income on transportation, 2nd highest household expenditure

Every year, vehicles transport 11 billion tons of freight and people travel more than 3 trillion vehicle-miles

Source: Transportation Energy Data Book, 2018

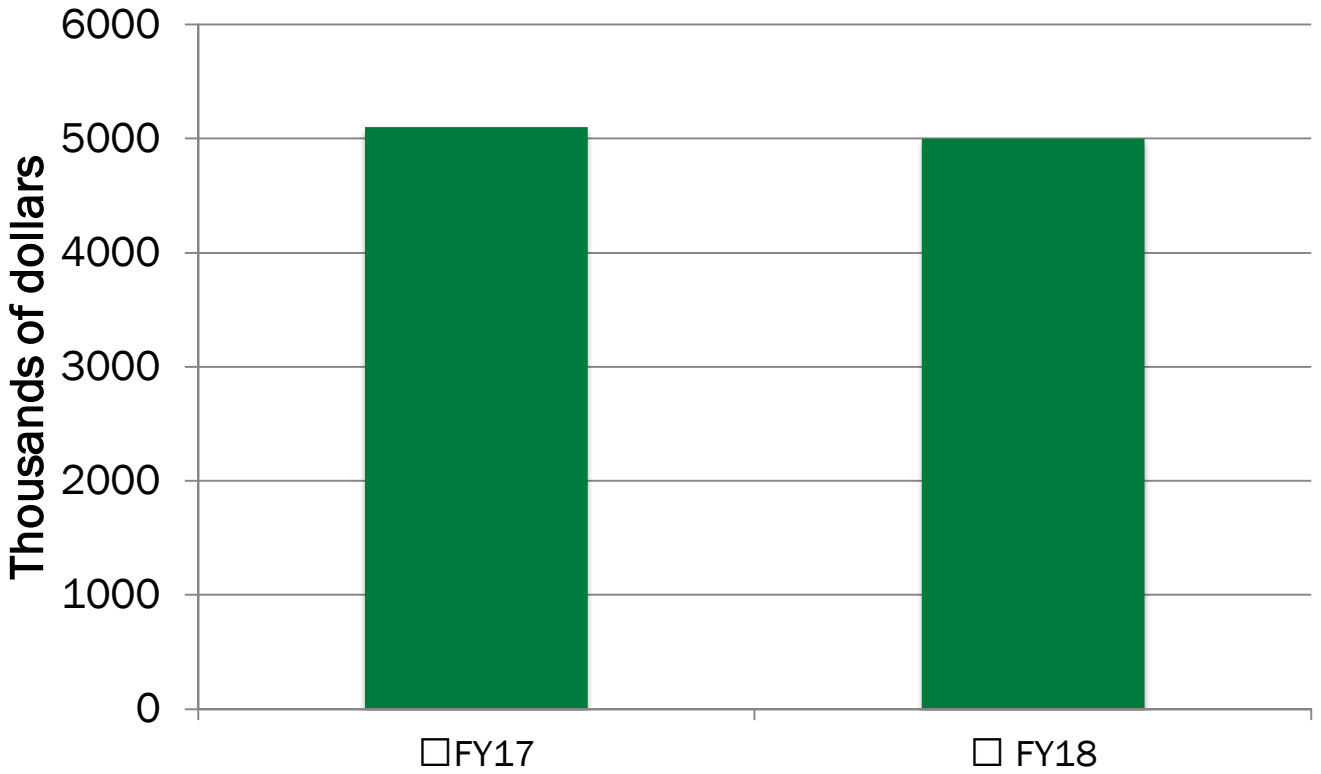
What we do with your taxes

mission

Develop and manage a portfolio of data-driven, advanced transportation technology analysis to answer critical questions and create insights about energy use and other relevant metrics.

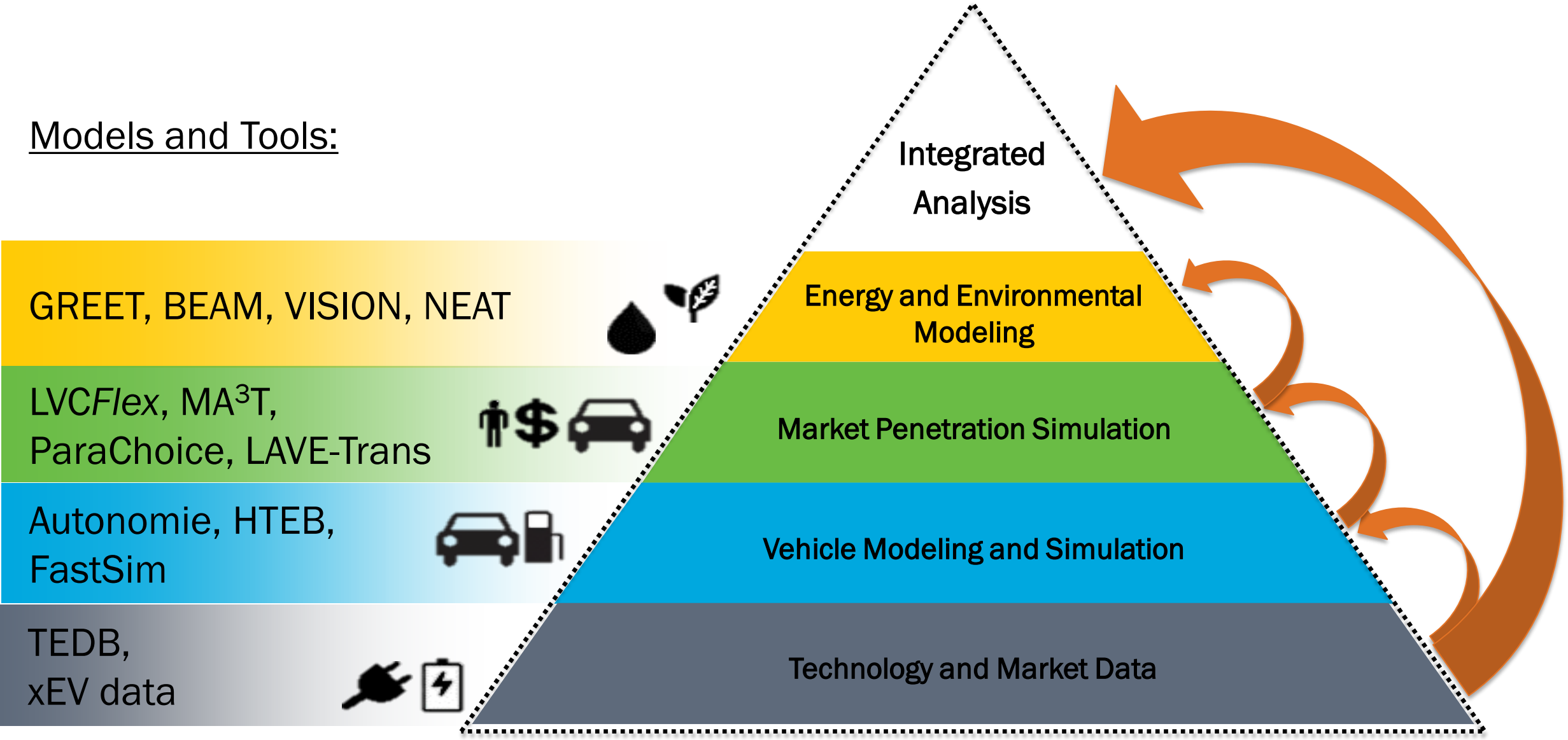
budget

- FY18 enacted budget although delayed with significant uncertainty, held constant at $5M
- National Laboratory support from ANL, ORNL, LBNL, NREL, and Sandia



How we accomplish our analysis

Models and Tools:



What we've accomplished in the last year

SAND2017-13044R

Article

Current and Fu
to-Grave Lifecy
Assessment

ANL/ESD-17/12

ORNL/TM-2017/695

storical Review of the Transportation
alysis Fact of the Week, 1996–2017

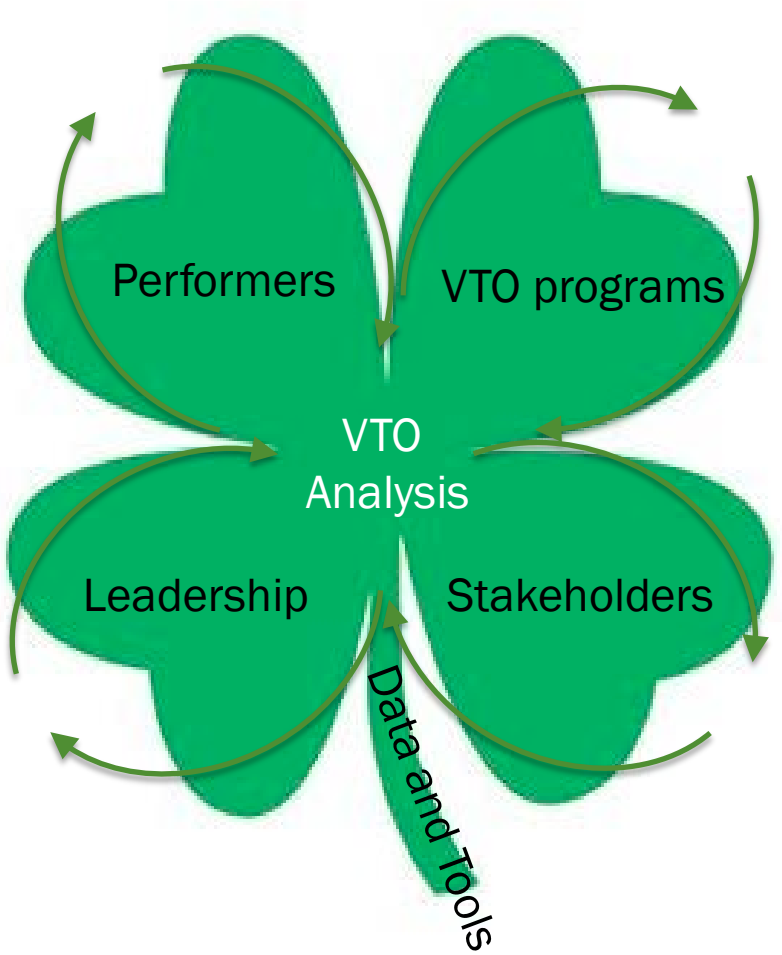
David Gohlke
Stacy Davis

October 2017

ANL/ESD-18/1

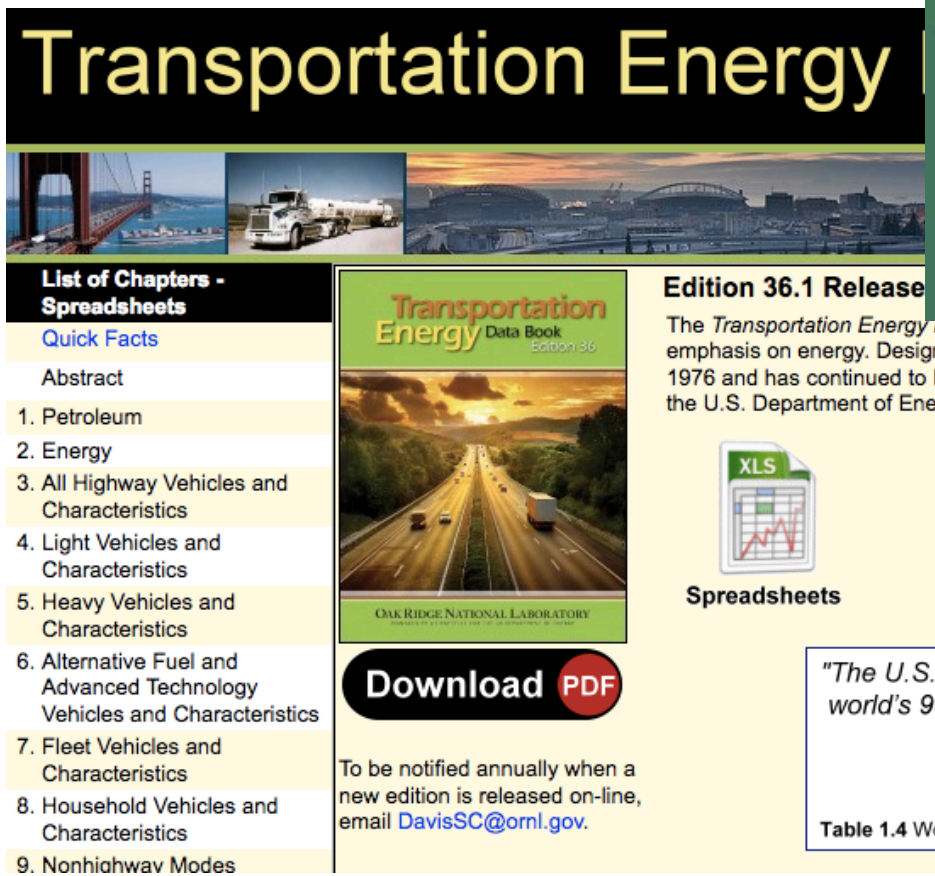
Impacts of Electrification of Light-Duty Vehicles in the United States, 2010 – 2017

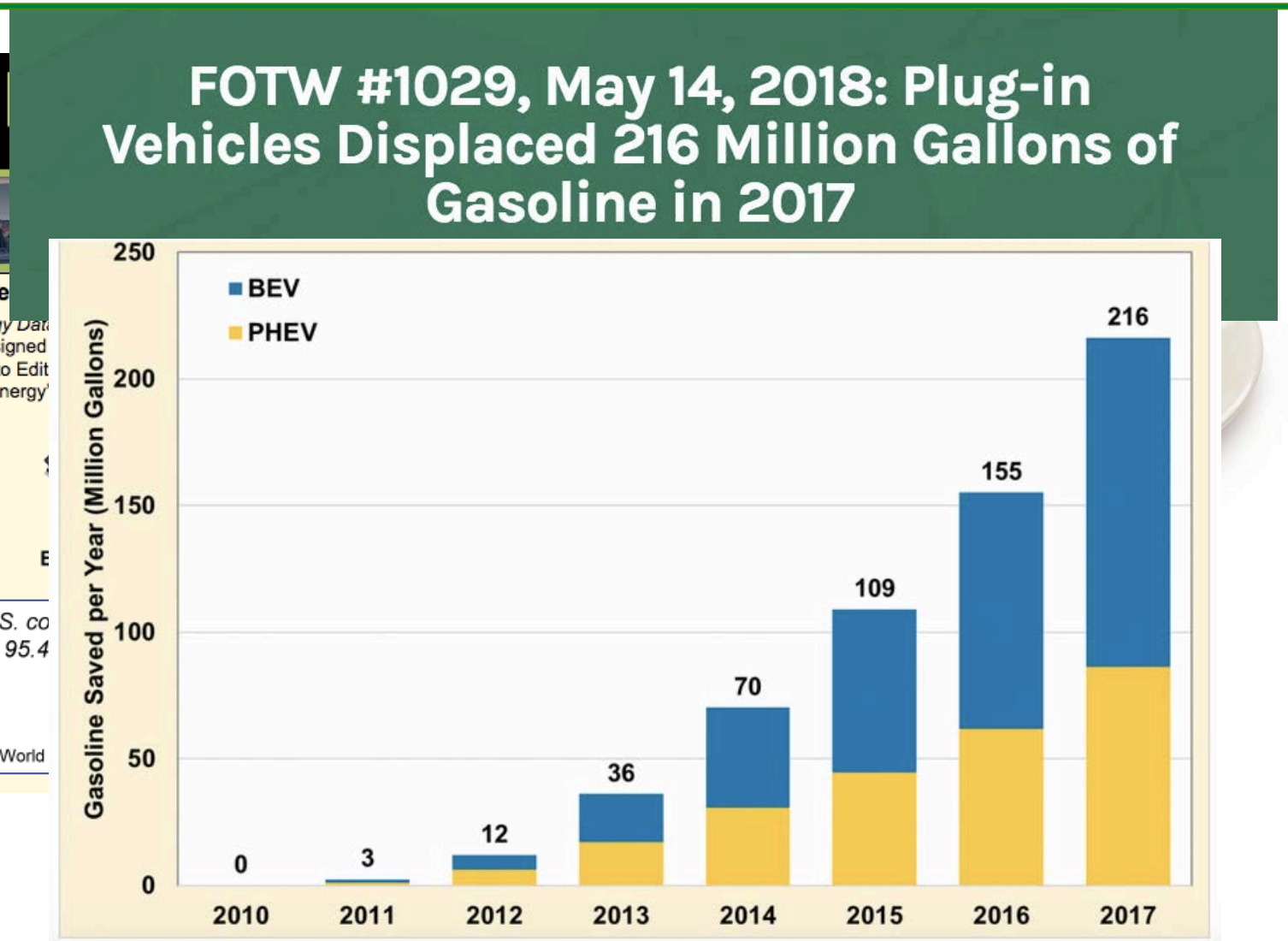
Purpose: Strengthen ties in transportation energy community



A Day in the Life of a VTO Analyst

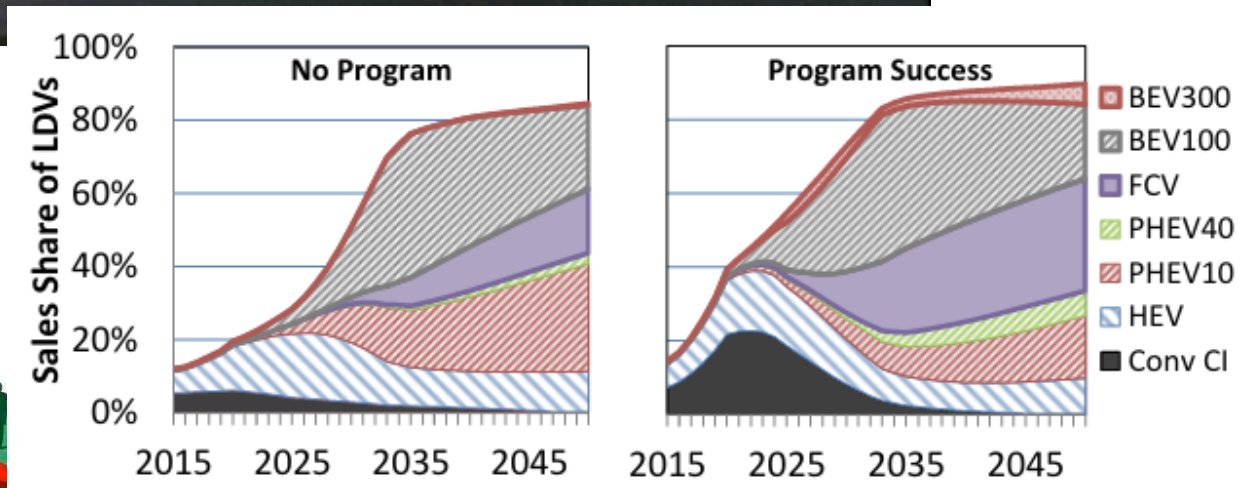
What we think about when we're drinking coffee in the morning

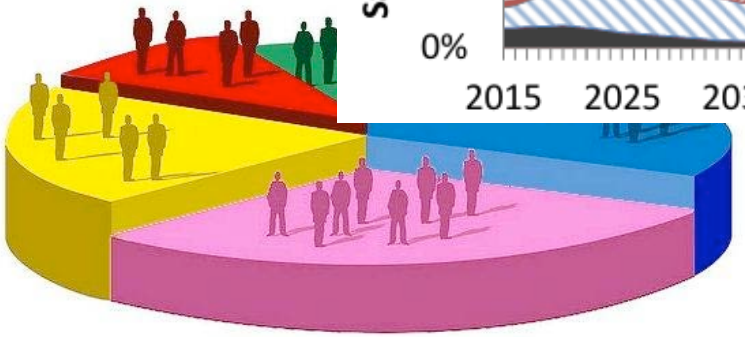




Who to talk to: Stacy Davis (ORNL) and Joann Zhou (ANL)

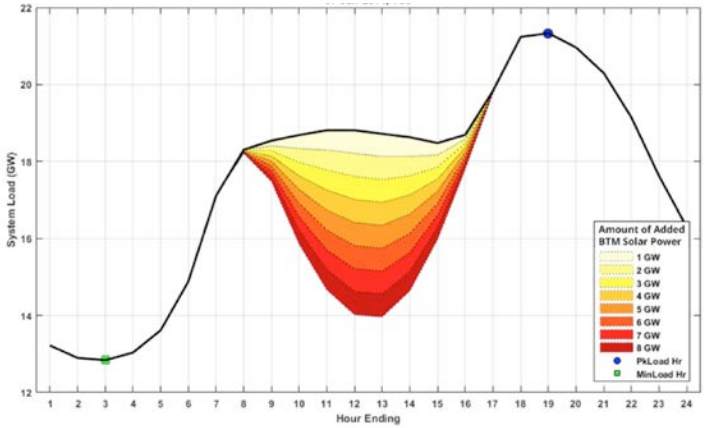
What we think about on the bus to work

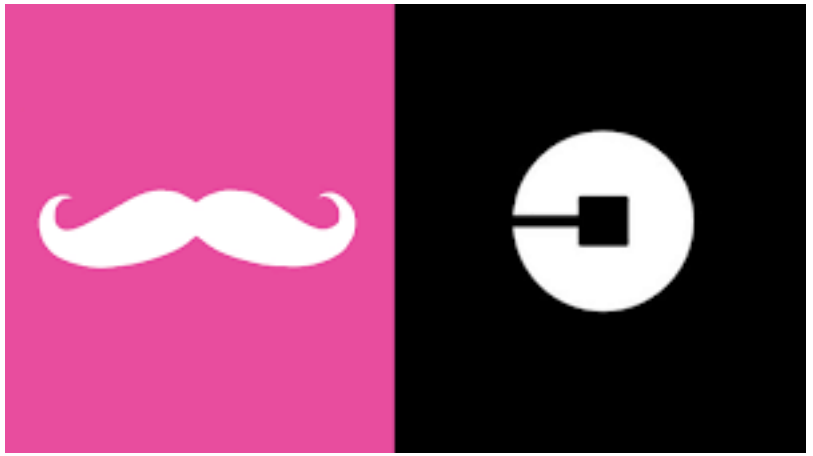




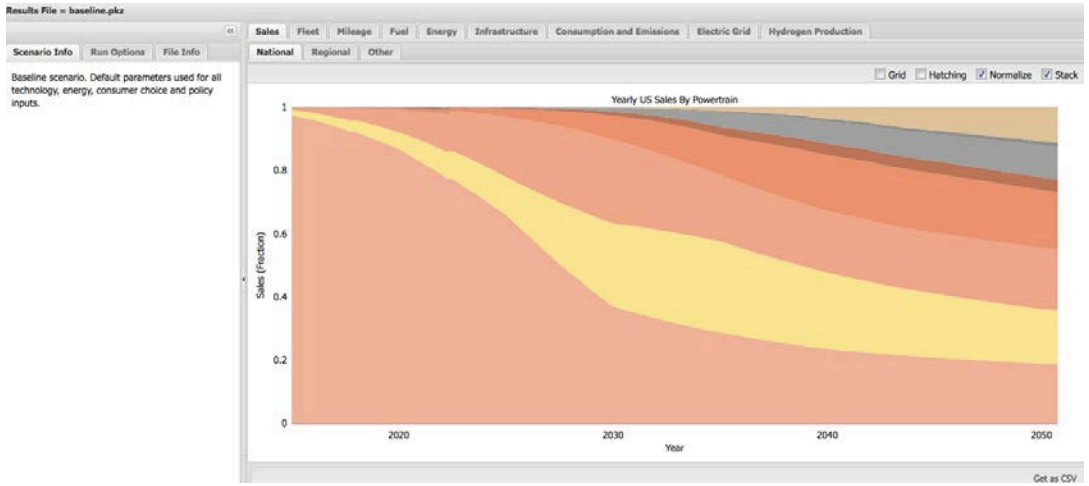
Who to talk to: Zhenhong Lin (ORNL) and Dave Gohlke (ANL)

What we think about in between meetings



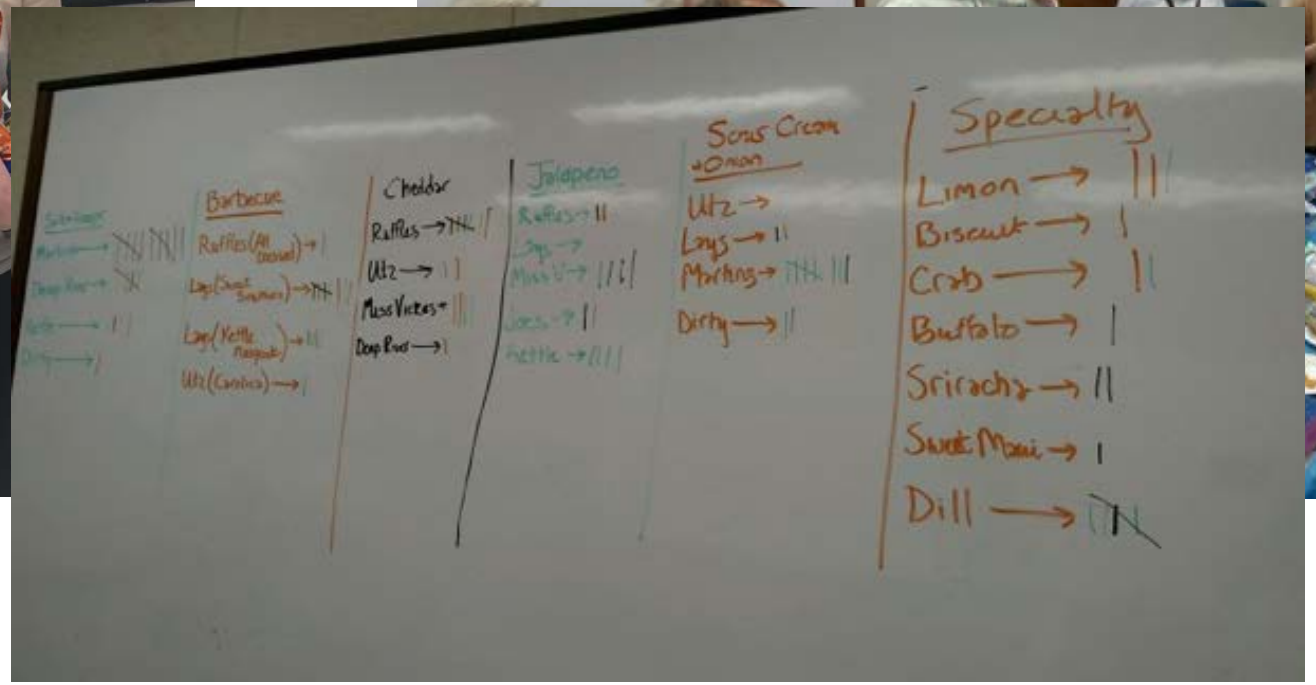


Who to talk to: Colin Sheppard (LBNL)



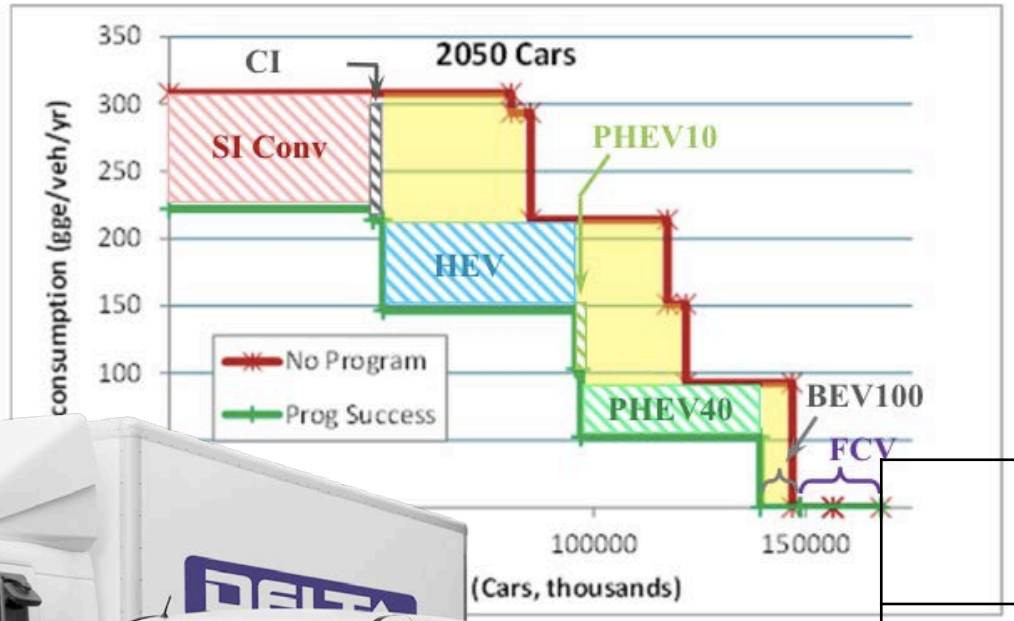
Who to talk to: Becky Levinson and Brandon Heimer (SNL)

What we think about when we're picking up a snack



Who to talk to: ME!

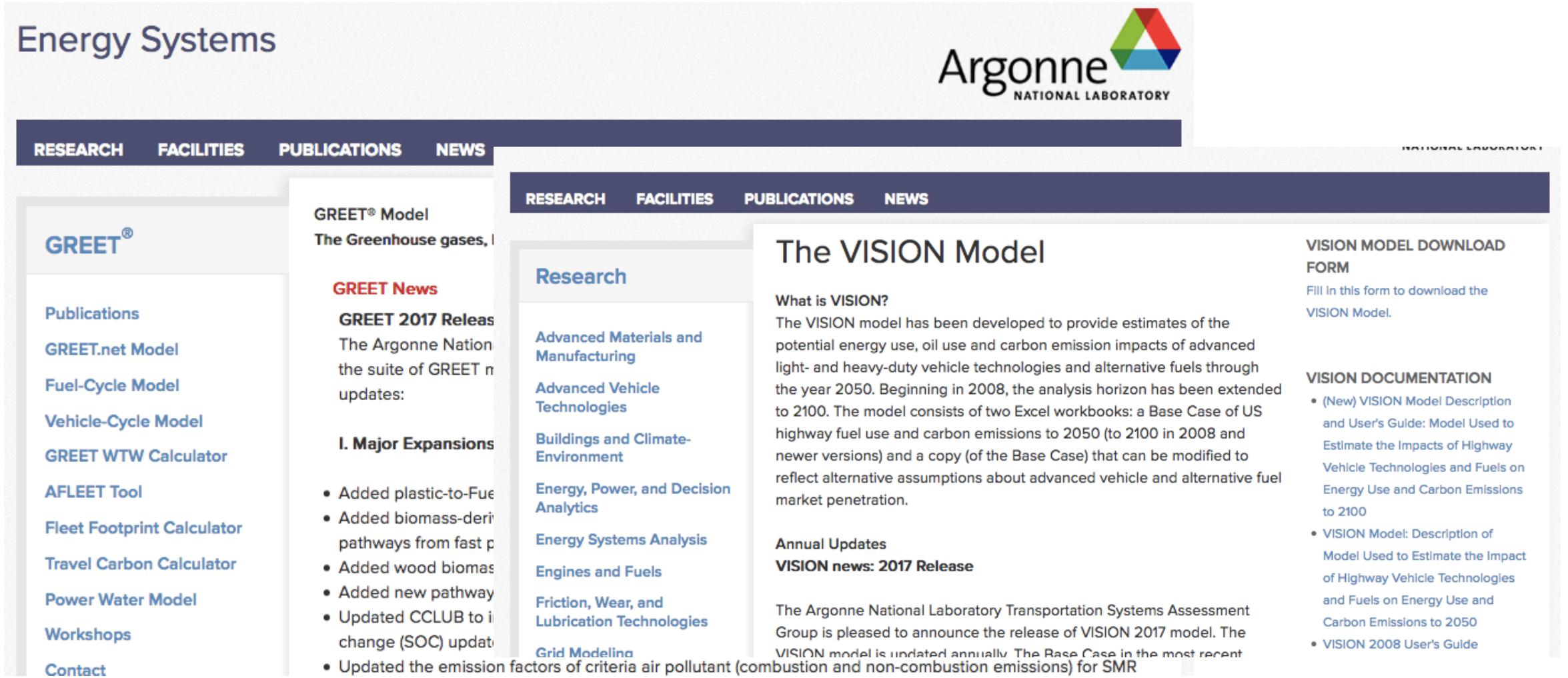
What we think about when we go to the gym



	DATA	VEHICLE	ECO	MARKET	APP/ACCT
expert input					
Autonomie					
HTEB					
GREET					
MA³T (et al)					
TRUCK					
VISION					

Who to talk to: Tom Stephens, Aymeric Rousseau, and Dave Gohlke (ANL)

What we think about when we walk the dog



Who to talk to: Michael Wang and Joann Zhou (ANL)

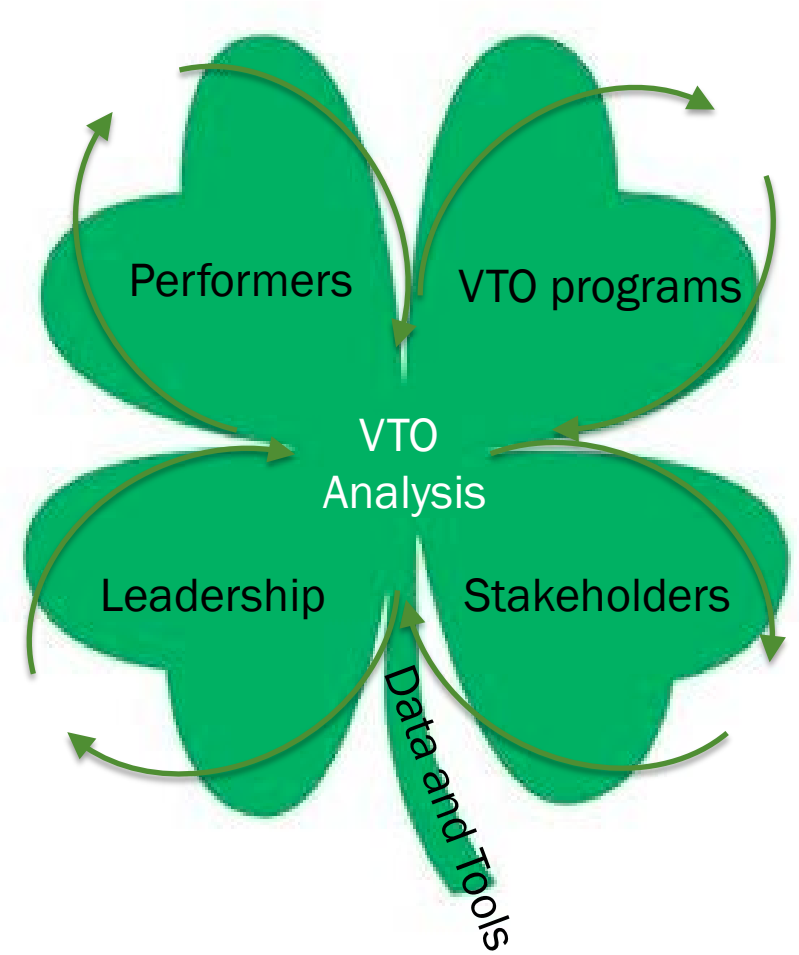
What we think about when we cook dinner

Who to talk to: Alicia Birky (Energetics)

What we think about when we brush our teeth before bed

Who to talk to: Jeff Gonder, Matteo Muratori, Eric Wood, and Aaron Brooker (NREL)

Purpose: Strengthen ties in transportation energy community



Welcome to the community! Come see more of us

FY 17 AMR Presentations	Presentation/Poster
Modeling Framework and Results to Inform Charging Infrastructure Investments	VAN026 (oral)
VTO Program Benefits Analysis	VAN018 (oral)
Electric Vehicle-Grid Analysis Benefits	VAN028 (oral)
ANL VTO Analysis Modeling Program	VAN017 (oral)
Assessing the Energy and Cost Impact of Advanced Technologies through Model-Based Design	VAN023 (oral)
Transportation Data Program: A Multi-Laboratory Coordinated Project	VAN016 (oral)
Transportation Energy Evolution Modeling (TEEM) Program	VAN021 (poster)

Analysis poster is on **Tuesday evening 5-7pm**

Analysis oral presentations are on **Thursday 8:30 am-noon** Salon H

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Thank you!

Rachael Nealer, PhD

Program Manager, Analysis

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